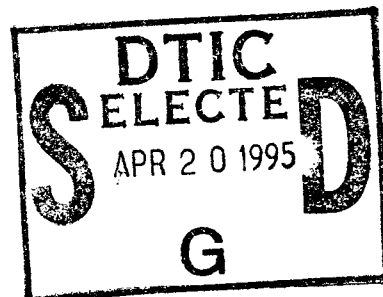
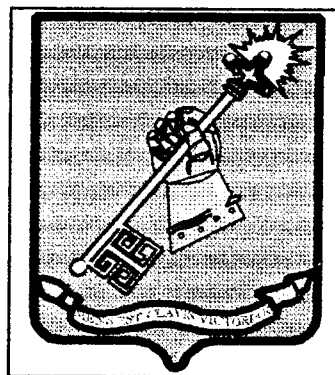


THE ROLES AND FUNCTIONS OF FIRE SUPPORT IN PEACE OPERATIONS

A Monograph
by

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Field Artillery



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Fort Leavenworth, Kansas**

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ABSTRACT

THE ROLES AND FUNCTIONS OF FIRE SUPPORT IN PEACE OPERATIONS

by MAJ Charles S. Kellar, USA, 61 pages.

The collective security environment has changed dramatically in recent years. Ethnic conflict, traditional rivalries and religious disputes have increased the scope and frequency of peace operations for military forces. Instability is now the "norm" which characterizes nearly all peace operational environments. UN and US forces are ostensibly committed to peace operations on a continual basis and must, therefore, extract the maximum contribution from each component element. Versatile application of all capabilities within the fire support battle operating system (BOS) will enhance the peace force's ability to implement the political mandate.

This monograph analyzes the potential roles and functions for the fire support BOS during the conduct of peace operations. Recent peace operations suggest five methods that fire support can be used during peace operations: conventional use for force protection, psychological intimidation, command and control, agreement compliance and other specified collateral missions. The four most recent peace operations involving significant US participation form the database for the analysis. Additionally, combat training center results from the limited number of peace operation rotations conducted form a fifth case study.

This study concludes that there are important roles and functions for the fire support battle operating system during peace operations. Historical evidence supports each of the five categories of roles and functions proposed. Of these roles, force protection remains the highest priority for fire support use. Fire support units and elements are also well-designed for non-traditional missions common during peace operations. However, regardless of the role or function performed, fire support involvement in peace operations requires updated doctrine and a focused training approach. The complexity of even "simple" missions during peace operations demands comprehensive training in joint operations. "Skills fade" must also be guarded against when fire support units are deployed on peace operations.

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TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. STRATEGIC AND OPERATIONAL ENVIRONMENT OF PEACE OPERATIONS	
Definitions	5
Political Instability of Peace Operations	7
Media and Non-Governmental Organizational Impact	8
Rules of Engagement	8
III. PROPOSED FIRE SUPPORT ROLES AND FUNCTIONS	9
IV. ANALYSIS OF FIRE SUPPORT USE IN PEACE OPERATIONS	16
Beirut Multinational Force II	17
Operation Provide Comfort	20
Operation Restore Hope	23
Operations Grapple and Able Sentry	28
Combat Training Center Lessons Learned	30
V. FIRE SUPPORT DOCTRINAL AND TRAINING IMPLICATIONS	31
Doctrine	32
Training	34
VI. CONCLUSIONS	37
APPENDIX 1: DEFINITIONS	39

TABLE OF CONTENTS (cont)

	Page
APPENDIX 2: ACRONYMS	43
ENDNOTES	45
BIBLIOGRAPHY	54

INTRODUCTION

The July 1994 National Security Strategy of Engagement and Enlargement (NSS) reinforced former President George Bush's pledge to provide United States (US) support to peace operations by offering strategic lift, training facilities, military expertise, equipment, and facilities. The NSS recognizes peace operations as an integral method for achieving international security. It describes peace operations as an

"... important component of our strategy. From traditional peace-keeping to peace enforcement, multilateral peace operations are sometimes the best way to prevent, contain, or resolve conflicts that could otherwise be far more costly and deadly."¹

Clearly, the US considers peace operations as a definitive method for the international community to impose its resolutions. Equally clear is US intent to continue contributing military forces to the support of peace operations. Recent examples of US commitment, e.g., Kurdistan, Somalia, Rwanda and Haiti, support this perspective.

Commitment of US military forces in this manner requires the efficient and complete use of all battlefield operating systems (BOS). In 1992, the Commander of the Army's Training and Doctrine Command (TRADOC), General Frederick M. Franks described the Army of the 90's: "We will not have room for specialists. We must develop a team that plays both ways, a team that is scrappy and willing to perform many missions. A team that is versatile and agile."² Versatile application of the capabilities within each BOS enables the creation of peace operation force packages better suited to implementing the political mandate for the mission. Yet, the history of recent

US participation in peace operations does not reflect this versatile use of fire support capabilities.

One of the first US peace operations was the Dominican Republic intervention in 1965. Code named Power Pack, the mission resulted in the deployment of over fourteen battalions of marine and army forces to separate combatants involved in a civil war.³ Elements of the fire support BOS supporting these units consisted of mortars, light and medium artillery, and close air support. However, restrictive rules of engagement (ROE), indicative of the politicized nature of the operation, prohibited the use of fire support. These restrictions resulted in the redeployment of the 82nd Division Artillery less than a month after the operation began.⁴ Fire support capabilities were not used throughout the duration of the operation.

Similarly, Operation Provide Comfort (OPC), the 1992 multinational coalition intervention in northern Iraq, highlighted disagreement over fire support usefulness. Initially, British artillery was not deployed due to the perception of British politicians that fire support units were inappropriate for humanitarian operations.⁵ French elements also deployed without any fire support structure.⁶ This shortfall forced the combined task force (CTF) to stretch limited US fire support assets to create a fire support system for their brigade.

The 1992 armed humanitarian intervention into Somalia again demonstrated the discord surrounding the role of fire support in peace operations. Artillery units were restricted from deploying for the operation while the ROE restricted any use of ammunition over 20mm calibre without senior-level approval.⁷

The hesitancy to utilize fire support systems and assets during the conduct of peace operations is understandable. The paradox between fire

support system capabilities and the social/political constraints associated with peace operations creates uncertainty over fire support's appropriateness for this type of mission. Major General (Ret) Raphael Hallada, former Commandant of the United States Army Field Artillery School, recognized this paradox in his 1990 Field Artillery Journal article titled "Field Artillery Flexibility". General Hallada stated

" . . . The social-political sensitivities surrounding most smaller conflicts dictate we use our tremendous firepower judiciously and give paramount importance to avoiding non-combatant casualties and unnecessary destruction of property. . . .we must clearly understand the rules of engagement and unerringly adhere to restrictive fire measures. . . . Considerations include the best use of target acquisition assets, careful selection of appropriate munition types and volumes and selection of fire support means other than field artillery when appropriate (such as mortars, air or electronic warfare).⁸

Hallada's comments were written immediately following Operation Just Cause and focused on fire support's role in low intensity conflict (LIC). His observations are even more germane considering the volatile, unstable, and varied conditions in which peace operations currently occur.

The environment in which peace operations are executed merely exacerbates this paradox for the fire support BOS. Conditions confronting military forces include politically unstable or non-existent governments; deployment to remote and austere regions of the world; disordered and confused civilian populations; and dangerous military threats from factional elements. Additionally, the increased proliferation of modern weapons throughout the world has elevated the lethality of even the most benign military force. Readily available mortars, anti-tank weapons and surface-to-air missiles dominate the landscape of peace operations. The combination of these weapons and potentially sophisticated leaders who capitalize on the unique characteristics

of the environment in which they fight (urban, mountainous, jungle) form deadly hazards for peace operation forces. The capabilities of the fire support battle BOS provide the peace mission commander methods and systems to counter these perils.

Nevertheless, the highly charged political and diplomatic environment of peace operations often limits the employment of fire support weapons and systems. In both the Dominican Republic and Somalian interventions, fire support restrictions imposed through the ROE limited the incorporation of fire support capabilities. Neither the ad hoc arrangements for fire support that were developed for Operation Provide Comfort, nor the total reliance on the capability of air support (which has historically been determined to have only a limited role in peacemaking operations)⁹ are adequate. The fire support BOS can contribute to the conduct of peace operations and its effective utilization will prove important to future operations. Fire support roles are an integral part of peace operations.

This monograph proposes that multiple fire support roles and functions exist in peace operations. Recent peace operations suggest five methods by which the force commander can utilize the capabilities contained within the fire support BOS: conventional use for force protection, psychological intimidation, command and control, agreement compliance and other specified collateral missions.

The first section of the monograph delineates specific aspects of the strategic and operational environment which impact fire support use during peace operations. Proposed roles and functions for the fire support BOS are then presented. Subsequent analysis of recently conducted peace operations will

determine the feasibility of these roles for the fire support BOS. The final section analyzes and determines the doctrinal and training implications of these roles.

THE STRATEGIC AND OPERATIONAL ENVIRONMENT OF PEACE OPERATIONS

Many factors shape the strategic and operational environment within which US military forces operate when executing peace operations. Terminology, political ramifications and military considerations interact to influence the conditions in which US forces function. The highly ephemeral nature of peace operations further complicates the military's role. Fire support roles are, as a consequence, influenced by these factors that are external to the military force. Analysis of the environment of peace operations will begin with a brief definitional review.

DEFINITIONS

Clearly understanding the terminology used to describe the different missions associated with peace operations is a particularly difficult task. The multitude of players involved use slightly different definitions and viewpoints when approaching a mission. Additionally, differing types of peace operations dictate different military approaches. For analysis purposes, we will utilize US doctrinal definitions as these terms form the framework within which the fire support BOS will function.

Two definitions of peace operations exist within United States military doctrine. Joint Publication 1-02, Dictionary of Military and Associated Terms defines peace operations as:

[operations] encompassing peacekeeping, peace enforcement and any other military, paramilitary or non-military action taken in support of a diplomatic peacemaking process.¹⁰

Army Field Manual 100-23, Peace Operations (Draft Version 6) expands upon this definition describing peace operations as:

[operations] encompassing observers and monitors, traditional peacekeeping, preventive deployment, security assistance to a civil authority, protections and deliver of humanitarian relief, guaranteeing rights of passage, imposing sanctions, peace enforcement and any other military, para-military or non-military action taken in support of diplomatic peacemaking process.¹¹

The subordinate activities of peace operations include peace making, peacekeeping, humanitarian intervention, peace enforcement and peace building. Each subordinate mission has specific parameters associated with it, particularly for military forces. Appendix One includes comprehensive definitions and an expanded description of the activities conducted in each type of peace operation.

The fire support system provides the commander a method to rapidly supplement his military force. Fire support is defined by Field Manual 6-20, Fire Support as

. . . the collective and coordinated use of indirect-fire weapons, armed aircraft, and other lethal and non-lethal means in support of a battle plan. Fire support includes mortars, field artillery, naval gunfire, air defense artillery in secondary mission and air-delivered weapons. Nonlethal means are electronic warfare capabilities of military intelligence organizations, illumination and smoke.¹²

However, fire support weapons emanate a footprint that manifests firepower and destructiveness. As area fire weapon systems, field artillery, mortars and armed aircraft cause material damage with lethal effects. These effects are mitigated through the use of laser guided precision munitions (PGMs). Additionally, use or appearance of the use of fire support weaponry can create the perception of heavy firepower within the force deployed.

POLITICAL INSTABILITY OF PEACE OPERATIONS

The recent evolution of the international security environment has modified the nature of conflict requiring peace intervention forces. Ethnic conflict, religious fundamentalism, population growth and migration, famine and natural disasters form the basis of more violent and more permanent conflicts between peoples.

The number of operations that fall between the traditional peacekeeping mission and a peace-enforcement mission has burgeoned. The new and particularly perplexing problem for military forces is the overlapping and unstable nature of these missions. International community intervention is no longer limited to conflicts where belligerent consent is procured beforehand. Peace operations now occur in non-consensual environments in which one or more of the belligerents do not desire stability. As a result, the peace force's intent to establish and maintain stability is opposed by groups hoping to further their political or military agendas. Consequently, operations that begin as a peacekeeping or humanitarian relief can rapidly escalate to a peace-enforcement operation. Fluctuation between stability and instability heightens a military forces' vulnerability while increasing its requirement for force protection.

The nature of the peace operation has also evolved. Often described as chapter six and one-half to six and three-quarters (in reference to the United Nations (UN) chapters authorizing the use of force)¹³, these missions are politically and militarily unstable often fluctuating in the amount of force required to enforce the international mandate. Peace missions that begin as peacekeeping can breakdown and place the deployed force in jeopardy. Peacekeepers in Cyprus and Sri Lanka¹⁴ are examples of a mis-match of force capability and a belligerent's potential threat. In today's operational environment, peace operations, as a general rule, almost always include some form of combat.

MEDIA AND NON-GOVERNMENTAL ORGANIZATIONAL IMPACT

International non-governmental organizations (NGO) (e.g., Red Cross, CARE, Doctors Without Borders) and the media significantly impact the environment of peace operations. Media and NGO focus increases the global visibility of the conflict and may heighten tensions between the belligerents.¹⁵ Additionally, media and NGO actions also affect the US political decision making environment. Whereas past US interventions were generally based on an analysis using the Weinberger Criteria¹⁶, present day impetus for intervention in can result from focused media coverage or a NGO's suddenly impassioned call for action.

RULES OF ENGAGEMENT

Political constraints are habitually manifested through the use of ROE. Developed by political and military leadership, ROE are the primary means by which the force commander conveys political, diplomatic, legal and military

guidance to his force.¹⁷ ROE incorporate the need for mission accomplishment with the requirement to protect the force. Establishing ROE for multinational coalitions operating under the auspices of the UN poses challenging problems for the peace operation commander. National political interpretations of the UN mandate can result in varying ROEs for different national contingents.

UN policies also contribute to the development of the ROE. Although still somewhat constrained, UN policy on the use of force has recently broadened from "individual" to "institutional" self defense. Using force is now authorized for resisting all attempts aimed at preventing the execution of a UN operation or mandate as well as personal self defense.¹⁸

In summary, the strategic and operational environment of peace operations is complex and dangerous. Multiple organizations with multifarious agendas shape the landscape in which military forces must execute their mission. Normally, some level of hostility exists to further complicate accomplishment of the peace mission. Lastly, ROE link the political mandate to appropriate military actions "on the ground". Determination of appropriate fire support BOS contributions in this type of environment is the next section's focus.

PROPOSED FIRE SUPPORT ROLES AND FUNCTIONS

The requirements to execute peace operations suggest a number of fire support roles to consider for future missions. Analysis identified five specific categories of peace operation fire support functions: conventional use for force

protection, psychological intimidation, command and control, agreement compliance and collateral missions.

Conventional use of fire support during peace operations is focused on providing force protection to military personnel. Force protection is doctrinally defined as an essential element for all US commanders. Recent doctrinal publications clearly outline security of the force as a critical element of Operations Other Than War (OOTW) missions. FM 100-5, Operations, outlines security as an equivalent of a principle of war for the execution of a peace operation. FM 100-23, Peace Operations and various joint publications likewise highlight the importance of protecting the force during a peace operation.¹⁹ For many operations, the political mandate supporting US participation in the peace operation rests on the maintenance of force protection.

The requirement for force protection remains constant whether the mission is peacekeeping or peace-enforcement. International philosophy reflects the peace operation unit's right to self defense or to defend the execution of the UN mandated operation. More aggressive use of fire support may be authorized as the intensity of operations increases towards peace-enforcement . This concept does not violate the basic peace operational tenet of using "just enough" force to accomplish the mission. Instead, it reflects the impact American casualties have on the political mandate for continued US participation in a peace operation. This impact is particularly crucial for missions where readily apparent US vital interests are not at stake. Consequently, US forces must retain the capability to perform the full spectrum of combat if forced to do so by a belligerent force.

Conventional fire support use can be classified into two types; lethal fires and nonlethal fires. Lethal fires utilize the destructive power of fire support weaponry to assist the commander in accomplishing the peace operation

mission. Non-lethal fires use capabilities of the fire support system to limit belligerent activities without the accompanying destruction associated with lethal fires. The role for both types of conventional fires remains force protection.

Fire support platforms capable of delivering lethal fires were used in all of the peace operations reviewed for this study. Planning for each mission included a fire support capability in all operation orders prepared. For example, the US peacekeepers in Macedonia plan mortar and close air support fires for self defense.²⁰ British units in Bosnia conducting peacekeeping and peace-enforcement missions have used mortar fire for self defense of units under fire.²¹

Operation Provide Comfort and Operation Restore Hope (ORH) provide additional examples of fire support contributions to the force protection mission. During confrontations with Iraqi army forces and the Kurdish Peshmerga, OPC maneuver elements successfully capitalized on the threat of air support and artillery fires to discourage the belligerents from opposing coalition forces.²²

Precision fires linking ground tactical units with delivery platforms are the preferred method for providing fire support to the peace force. Laser designators used by ground units ensure correct target selection and precise target impact of the fired munition, thereby greatly reducing the circular probable errors associated with fire support weapons. Tactical air and attack helicopters were often the preferred delivery means for fire support in both OPC and ORH due to their ability to "lock on" to laser-designated targets.

The use of lethal fire support becomes even more likely as the mission transitions towards peace-enforcement. Peace operations which cross this threshold and require maneuver forces to "take ground" will need a more robust fire support capability. Examples of this type of operation were OPC and ORH. OPC artillery and tacair supported the expansion of the security zone in

Northern Iraq over tremendous distances.²³ Extension of the humanitarian relief sector security during ORH required similar fire support planning and flexibility.²⁴

Fire support capability to shift firepower rapidly throughout the zone of operations creates an additional role for fire supporters. Similar to conventional wartime missions, fire support systems provide the commander an excellent means by which to shift firepower quickly throughout his zone. All weather, immediately responsive fires from artillery and mortar units, combined with rapidly delivered air fires, provide the commander significant firepower. This method of applying firepower is preferred to heavy armor due to the speed with which the fire support system can respond. Ground movement of heavy forces, many times through urban terrain, can be slow and methodical. Ambushes can further delay movement. For example, ground reinforcements in Somalia had to fight through ambushes in Mogadishu enroute to extracting a besieged US force.²⁵

The non-lethal fires capability of indirect fire systems provides the force commander additional flexibility. Target marking, illumination fires and indirect warning fires were used by the Beirut Multinational Force (MNF) and coalition forces during OPC to communicate an intent to belligerent units. Experts developing a peace operation confrontation standard operating procedure (SOP) also advocate this methodology for dealing with hostile belligerents.²⁶ Evidence supports a conclusion that the use of non-lethal electronic warfare (EW) is an important role for fire support. During peacekeeping missions, EW resources can contribute to the development of the intelligence picture for the operation. During more volatile operations such as peace-enforcement, EW assets can disrupt or delay belligerent activities, resulting in increased force protection or reduced conflict between belligerents.

EW resources were able to effectively monitor enemy actions in Somalia contributing to the situation development.²⁷ Jamming is the best example of limiting belligerent capability to carry out offensive actions.

Using fires to derive a psychological advantage is another important capability for the commander to retain. The flash, blast and stun effects available with fire support weapons can be extremely effective against the indisciplined type of troops often encountered during peace operations.²⁸ Firing non-lethal munitions such as smoke and illumination also provides the belligerent an unambiguous warning of US capabilities. The consequences of continued firing by the offending unit will result in the employment of lethal firepower against their position. This method was applied effectively by the marines in Beirut as well as coalition forces in OPC.

Equally important is the "psychological boost" friendly soldiers receive given the knowledge that firepower is available to provide force protection for them. S.L.A. Marshall described this boost as a ". . . shot in the arm. It moves men mentally and bodily, thereby breaking the concentration of fear."²⁹ Retention of this type of psychological tool may be even more critical in a firepower based military analogous to the US model.

Command and control contributions by the fire support BOS are likewise extensive and varied in nature. Fire support assets have performed a diverse number of missions ranging from task force staffing to liaison team staffing. The most common function performed is liaison duty. In all of the peace operations analyzed, the evidence indicates fire supporters functioned as liaison officer (LNO) teams. Organic transportation and communication make fire support elements (FSE) particularly well designed for this type of mission. Additionally, the organic four to six man staffing of the FSEs normally will meet the LNO team personnel requirement.

Lastly, fire support personnel must be able to operate the conventional fire support system. Air support was a key element to the success enjoyed by the peace operations reviewed. A fully functional fire support system is required to efficiently use these assets and integrate the air and ground functions during operations. Dispersed, solitary units must have robust fire support capability which can provide them responsive fires for force protection. Given the unstable nature of peace operations, this requirement is even more important today. Peacekeeping operations that have the potential of quickly transitioning to peace-enforcement operations demand a fully capable fire support system.

Fire support headquarters must also be prepared to function as maneuver task force staffs. Operations in Somalia and Panama indicate the willingness and/or necessity to use artillery unit headquarters in this manner.³⁰ Initial evidence from Haiti indicates that the 10th ID (L) Division Artillery Headquarters is the base unit of the ARFOR staff.³¹ The need for additional command and control assets in peace operations reflects the size of the operational areas and the decentralized nature of peace operations. This propensity to use artillery headquarters identifies a key role for the fire support BOS.

Fire support also contributes to monitoring agreement compliance between belligerents through the use of counterfire radars and artillery/mortar experts. Firefinder radars observe indirect fires and provide precise grid locations of firing weapon positions. This information can be used to determine which belligerent is violating the agreement. Most importantly, the radar's capability to assess blame impartially will deter aggressive belligerent actions. As a final resort, the radar can be linked to a delivery means (mortars, infantry, artillery, attack helicopters, etc.) to assist in the elimination of the violating party.

The use of artillery gunnery experts in Bosnia demonstrates an innovative use of fire support personnel to attain agreement compliance. The functions performed by these weapon site personnel are similar to normal safetying procedures performed on an artillery gun line during training. Additional training and familiarization with belligerent weapon systems and munitions is required. However, this method appears to be effective and may serve as the standard in future operations.

Although it is early in the evolution of peace operations, the available data provides an initial basis to derive collateral missions for the fire support BOS. Collateral missions are defined as those types of functions which can be performed by the organic capabilities of a unit. Roles identified here are not limited to artillery units or fire support elements, but could be applied to a multitude of similarly configured units. However, fire support units have or can perform the identified missions particularly well and should therefore be considered capable of accomplishing these type of missions for the peace operation commander. These functions often form the backbone of peace operations and, as such, are critical to the force commander.

Reconnaissance functions during a peace operation are the primary means to monitor and observe belligerent actions and compliance with political agreements. Both peacekeeping and peace-enforcement patrols require thorough reconnoitering of belligerent positions and zones. Reconnoitering throughout a large area of operations typical of peace operations is usually beyond the capability of the maneuver force assigned. ORH battalion zones typically covered over 80km X 125km while the French brigade's zone during OPC was over 160km in width.³² British units in Bosnia escorted convoys traversing routes over 150 km long while units preparing for duty in Macedonia anticipated company sectors spanning 100km by 50km.³³ The missions

required of these units were extensive. Route reconnaissance, roadblocks, intelligence gathering, main supply route security, and convoy escort reflect the magnitude of the reconnaissance task facing peace operational units. Clearly the twenty-four man dismounted scout platoon organic to a light infantry battalion cannot accomplish the extensive reconnaissance required in a sector of this size. Augmentation of organic reconnaissance forces is normally required. Rotary winged air reconnaissance, military police, and air defense stinger vehicles served as the augmentation during ORH.³⁴ Artillery units, designed with a large amount of organic communication and transportation equipment, are also capable of performing this vital function.

Force mobility is an essential requirement for units involved in peace operations. Units deployed without the proper mix of transportation capabilities can prove to be ineffective. Artillery units possess large numbers of vehicles from which the force commander can enhance maneuver unit mobility. Cross-leveling or task organizing the lift capacity of an artillery battalion is a potential method to solve the transport shortage facing the peace operation command.

ANALYSIS OF FIRE SUPPORT USE IN PEACE OPERATIONS

This section analyzes historical and current uses of fire support in peace operations to substantiate the validity of the proposed roles and functions. The four most recent peace operations involving significant US participation form a series of case studies by which fire support roles are examined. Although extremely limited due to the small number of peace operation rotations conducted, data collected from Combat Training Center (CTC) lessons learned

forms the final case study analysis. Each case study provides a brief synopsis of the operation outlining the major belligerents, the causes of the conflict and the peace mission's operational concept. Fire support assets involved in the peace operation are then identified followed by an analysis of the different types of primary or collateral missions that the fire support BOS elements performed.

BEIRUT MULTINATIONAL FORCE II

The Israeli invasion of Lebanon in June 1982, dubbed "Operation Peace in Galilee", created the conditions for the establishment of the first of two Multinational Force interventions. The purpose of the Israeli invasion was to eliminate Palestine Liberation Organization (PLO) staging bases located within Lebanese territory that were being used for cross border military operations into northern Israel. At the request of the Lebanese government, US, French, and Italian troops formed an armed interposition force to separate the Israeli Defense Forces (IDF) from the PLO forces while Palestinian citizens evacuated Beirut by sea. MNF I intervened in Beirut on 25 August 1982 and withdrew less than thirty days later on 10 September. The multinational force appeared to have accomplished effectively its peacekeeping mission.

The subsequent assassination of Lebanese President-elect Bashir Gemayel on September 14 and the apparent retaliatory murder of hundreds of Palestinian non-combatants in the Sabra and Shatila camps three days later destabilized the region. At the request of the Lebanese government the United States, France, and Italy reconstituted the multinational force to intervene and halt the escalating violence. MNF II deployed in late September 1982 coming ashore with a much more heavily armed force consisting of artillery, tanks, anti-tank missiles and tactical air assets. The MNF II's stated mission, peacekeeping, was not reflected by the force structure and firepower deployed.

The US ground troop contribution to MNF II was a battalion landing team (BLT) from a marine amphibious unit (MAU). The BLT occupied the southernmost MNF sector positioning its' companies in and around the Beirut International Airport (BIA).

In September 1983, the conflict escalated into an outright civil war between five factions: the Lebanese Army and Christian Phalangist militia opposed by Syrian backed Druze, Shiite and Palestinian militias.³⁵ Subsequent MNF II intervention on behalf of the Lebanese Armed Forces (LAF) began to erode the MNF's impartial status as peacekeepers. US naval gunfire combined with French and US air support created the perception that the MNF II was a participant in the conflict and essentially negated the capability of the Marines to perform as peacekeepers.³⁶ This loss of peacekeeping impartiality resulted in attacks on French and US positions that claimed 342 soldier's lives.³⁷ Political considerations soon demanded the MNF contributing countries to withdraw their forces from Lebanon. Following a final, unsuccessful US effort to establish a UN peacekeeping force, MNF II forces withdrew from Lebanon in March 1984.

Fire support assets available to US ground forces during the conduct of MNF II were extensive. Mortars, field artillery, attack helicopters, naval gunfire (five and sixteen inch guns), naval tactical air, target acquisition radars, and an air-naval gunfire liaison company (ANGLICO) team were available to support the BLT commander.

The US participation in MNF II is an excellent example of the criticality of fire support's force protection role in peace operations. Originally deployed as peacekeepers, the MNF spent nearly a year performing exactly that type of mission. In less than a month, the political landscape changed, thrusting the marine force into an unstable environment. Attacks upon marine positions were

tolerated until BLT personnel were killed and wounded.³⁸ Fire support assets then suppressed and, if necessary, destroyed the hostile belligerent positions.

Conventional fires during MNF II used both lethal and non-lethal munitions when engaging enemy positions. The non-lethal munition would demonstrate US capability to target and destroy the belligerent position and, hopefully, dissuade them from continued firing. The Marine BLT commander intended to use an initial volley of illumination rounds in this manner against units firing on his position.

The first use of retaliatory indirect fires followed a mortar attack on the marine BIA compound that killed and wounded members of the BLT. The suspected Druze rocket-battery position was located by forward observers and confirmed by the target acquisition battery radar. A six gun volley of artillery illumination rounds were fired as a warning to the Druze unit. Continued firing on the marine compound caused the BLT commander to fire a subsequent volley of high explosive rounds destroying the rocket position.³⁹ Illumination rounds were also marked enemy artillery or sniper positions for engagement with direct fire weapons, ground patrols or naval aircraft.⁴⁰

Continued attacks upon MNF and Lebanese positions increased the use of lethal fires. US forces also provided extensive airpower and artillery support to the LAF as the conflict escalated.⁴¹ BLT mortars and artillery fired in support of both the LAF and patrolling marine forces.⁴² Long range artillery and rocket fires from the mountains surrounding Beirut provoked further MNF response. In early spring of 1983, American forces responded to Druze and Pro-Syrian militia fire with ground and naval counterbattery fires.⁴³ US and French aircraft flew sorties engaging Druze militia positions in the Shuf mountains.⁴⁴

The use of fire support during MNF II could be condemned as having compromised the marines' peacekeeping status. The problem was not the marines' use of fire support in self defense, but the impression that the US was supporting an active combatant in the conflict, the LAF. Political decisions will control the direction of a peace operation but do not abrogate the need for adequate fire support for force protection.

OPERATION PROVIDE COMFORT

Following the UN forces convincing Gulf War victory in 1991, Kurdish and Shiite rebellions in northern and southern Iraq attempted to topple Saddam Hussein's regime. After brutally crushing the Shiite rebellion in the south, Hussein turned his attention to the Kurdish problem in the mountains of northern Iraq. Kurdish leaders had exploited Iraqi military weakness in the region, conducting limited military operations with the Peshmerga, the Kurdish military force.⁴⁵ Using helicopters and armored vehicles, the Iraqi Army overwhelmed the Kurdish forces, forcing a general Kurdish civilian flight towards Turkey. United Nations' reports quickly confirmed that nearly half a million Kurds were fleeing Hussein's brutal repression into the mountains along the Iraqi-Turkish border. Suffering caused by exposure, dehydration, hunger and sickness resulted in two thousand Kurds, mostly children, dying per day.⁴⁶ The highly publicized suffering resulted in passage of UN resolution 688 condemning the Iraqi oppression of the Kurds and requesting worldwide humanitarian aid for the Kurds.⁴⁷

Operation Provide Comfort (OPC) began in April 1991 with the airlift of relief supplies from Europe to the Iraqi-Turkish border. The Combined Task Force's (CTF) mission was to conduct relief operations.⁴⁸ Specific CTF tasks

outlined in the USCINCEUR oporder on 16 April included:

1. Identify locations for temporary shelter
2. Erect temporary living facilities
3. Relocate Iraqi (Kurd) displaced civilians to supportable locations
4. Be prepared to receive United Kingdom, French and Turkish forces
5. Be prepared to reinforce multinational security forces in Iraq
6. Be prepared to unilaterally operate, maintain and secure facilities
7. Provide airborne Combat Air Patrol (CAP) as necessary
8. Identify additional forces as required
9. Transfer admin and support functions to civilian organizations⁴⁹

CTF subordinate elements included a Combined Air Task Force (CAF), Joint Task Force Alpha (JTF-A), Joint Task Force Bravo (JTF-B), a Civil Affairs Brigade and the Combined Support Command. US Navy Task Forces 60 and 61 were also tasked to provide support to the CTF.⁵⁰

OPC started as a humanitarian relief operation but quickly transitioned to a peace-enforcement mission.⁵¹ Political and military leaders quickly realized that resettlement of the Kurds was the only feasible solution to the crisis. Resettlement in northern Iraq created the need to establish a security zone as a precursor to Kurdish movement. Coalition forces maneuvered into Iraq against Iraqi opposition forces to seize the terrain necessary for the security zone. The missions and tasks assigned to the JTFs by the CTF commander reflected this intent. The commander's concept for employment for each JTF was:

JTF-A: Provide immediate relief to the Kurds
 Establish infrastructure in the camps
 Transfer refugees to transit camps in JTF -B's area of
 operations in northern Iraq

JTF-B: Build transit camps
 Receive and care for refugees
 Secure the area
 Return refugees to their homes
 Turn relief operations over to civilian organizations
 Withdraw from Iraq⁵²

The resettlement of the Kurds was easily accomplished after the security zone was established. OPC forces concluded operations in northern Iraq and redeployed by July 1991.

Fire support assets deployed to support the CTF consisted of mortars, artillery, attack helicopters, and air force and navy close air support (CAS) aircraft. However, these assets were somewhat limited given the size of the area of operations. JTF-B, a division sized element, was allocated only half of the necessary artillery support and was extremely dependent upon attack air assets for fire support.⁵³

The artillery available was limited in other ways also. The initial deployment of British fire support assets into OPC was delayed by the mission's original classification as a humanitarian relief operation. However, hostile Iraqi actions towards the Kurds as they returned to northern Iraq from the mountains changed the British political perspective and a battalion of 105mm howitzers deployed into theatre.⁵⁴

The French contingent also arrived in theatre without organic fire support or anti-tank assets. As a result, the CTF had to create a robust fire support system for the French. The CTF provided the French an ANGLICO team to coordinate fires and conduct liaison between headquarters.⁵⁵ Dedicated on-call delivery assets included American attack helicopters and navy and air force CAS.

Fire support utilization was widespread during the conduct of OPC. Checkpoints set up and established throughout the zone of operations used illumination fires from mortars or direct support artillery to breakup difficult situations with obstinate Iraqi troops.⁵⁶ Flying check points, an offensive maneuver tool used during OPC to limit Iraqi freedom of movement, used fire

support assets to effectively intimidate belligerents and keep them from fighting coalition forces.

Air cover provided a show of force and firepower during OPC engagements. Fire support from air platforms proved to have an intimidating effect on belligerents and provided coalition forces a moral ascendancy in dealing with the belligerents. Major General Jay Garner, the JTF-B commander, directed the air assets supporting his task force to "fly low, slow and loud".⁵⁷ In all cases, the aircraft had a "sobering effect" on the belligerents and each incident ended without direct fires being exchanged by ground forces.⁵⁸ Air cover on-station combined with mobile mortar support provided the austere maneuver elements adequate firepower to intimidate Iraqi forces.⁵⁹ Additionally, attack helicopters were used during dangerous night missions to intimidate Iraqi forces. In summary, fire support provided by air assets was critical to protection of the force during the ground advance.

ANGLICO teams provided critical command and control links throughout the CTF. They performed their primary mission of coordinating fire support but also served as key LNO teams connecting the widely dispersed element of the CTF with their extended range communication assets.⁶⁰

OPERATION RESTORE HOPE

Unbridled civil unrest between Somalian clans and sub-clans began in January 1991 following a multifactional civil war and the disintegration of the government. Deterioration of the country's infrastructure and economy resulted in widespread starvation and famine among the Somali population. Controlling international aid shipments within Somalia became a method for clan families to extend their internal power struggle.⁶¹

The UN established a Somali peacekeeping operation, United Nations Operation in Somalia (UNOSOM) in July 1992 to monitor a cease fire brokered between warring factions. UNOSOM was enlarged to provide security for humanitarian relief convoys and distribution centers. Due to the worsening conditions in Somalia, e.g., continued looting, extortion, clan battles, in August 1992, the UNOSOM force was further expanded in size to provide humanitarian relief security. Continued diversion of relief supplies from the starving Somali population in subsequent months caused President Bush to direct US intervention. US forces were alerted for deployment to assist UNOSOM in providing security for the relief operations.⁶²

Upon notification by the National Command Authorities (NCA) to execute Operation Restore Hope (ORH), the US Central Command (USCENTCOM) designated the Commanding General (CG), 1st Marine Expeditionary Force (I MEF) as the joint and combined task force (CJTF) commander. Composition of the CJTF included Air Force, Navy, Marine and Army forces in addition to units contributed by coalition members.⁶³ Eventually designated as the Unified Task Force (UNITAF), the CJTF involved 38,000 soldiers from 23 nations.⁶⁴ The CJTF mission was to provide a secure environment for humanitarian relief efforts while operating under a UN mandate.⁶⁵ The primary tasks performed by the CTJF were securing and assisting the relief operations, organizations and agencies. Execution of these missions required extensive coordination and interaction with numerous NGOs and private volunteer relief organizations (PVOs). A four phase operation, specified tasks for the army forces (ARFOR) included securing the lodgement, establishing the ARFOR headquarters, expanding security operations out to relief distribution centers, and expanding security operations throughout each of

the humanitarian relief sectors. Civil disorder and lawlessness were the primary threats faced by the CJTF during the execution of UNITAF.⁶⁶

UNITAF transitioned to UN control with the establishment of UNOSOM II in May 1993. The mission for US forces supporting the UN was to provide force protection and specific assistance to UNOSOM forces as directed.⁶⁷ Threats faced by US forces during this operation also changed. Hostile actions taken against UNOSOM forces modified the type of mission to an armed humanitarian intervention. Attacks on UNOSOM forces resulted in forty six soldiers killed and the subsequent deployment of a heavy quick reaction force consisting of armor and artillery forces.⁶⁸ American participation in the UN sponsored operation ended in March 1994.

Fire support assets available for use during ORH consisted of mortars, attack helicopters, AC-130 gunships, close air support aircraft, and counterfire radars. 10th ID (L) Artillery deployed to Somalia to provide command and control for one of the combined task forces. Artillery systems were not deployed to Somalia by either the marines or the army until very late in the operation. Eight self-propelled 155mm howitzers were then available.⁶⁹

Upon notification of deployment, 10th Division (L) was tasked to fulfill the role of the ARFOR headquarters of the CJTF. Assignment of this mission required the division staff to rapidly expand its scope of operations as well as its size. Significant augmentation was required for the division to form the ARFOR headquarters. LNO teams and augmentees were formed from non-deploying divisional elements to supplement the staff. The primary source for these teams was the 10th ID (L) Division Artillery.⁷⁰ CJTF LNO requirements, initially filled by the Marine Forces (MARFOR) headquarters, also significantly taxed the division. 10th ID (L) filled ten of the CJTF requirements from brigade and battalion fire support element personnel.⁷¹ The

LNO teams performed liaison with a variety of elements including JTF staff, US government agencies, coalition forces, the UN, service components and civil organizations. Establishing these teams assisted the CJTF and the ARFOR in ensuring unity of command, coordinating logistical support, coordinating civil-military affairs and ensuring uniform interpretation of the ROE.⁷²

Conventional use of fire support for force protection was present during ORH. The Task Force Mountain OPLAN 93-2 (Frago 19) tasked the aviation brigade to provide attack helicopter fire support for deployment of the quick reaction company (QRC).⁷³ Likewise, fire support for exposed units was coordinated using attack helicopters. Fire support for an engineer unit constructing a key bailey bridge within the Kismayo humanitarian relief sector was on-call attack helicopters.⁷⁴

Although there was no use of marine or naval tactical air, extensive planning for their use in a force protection role took place. Political considerations dictated that the delivery of any type of fire support munition required precision targeting and delivery. Planning for use of air delivered munitions revolved around two primary considerations: the proximity of friendly forces and minimizing the collateral damage to the civilian property and populace. Extensive coordination established techniques and procedures between army ground forces and navy and marine air delivery platforms to use precision guided munitions.⁷⁵ A-6 and F-18 contingency PGM missions were planned and rehearsed but not executed during ORH. Laser guidance systems such as the OH-58D and the combat observation lasing team (COLT) were determined to be the required control methods for target identification.⁷⁶

Expansion of the humanitarian support mission to the southern part of Somalia (vicinity Kismayo) resulted in the formation of a brigade sized combined task force (CTF). The 10th ID (L) Division Artillery headquarters

(HQ) was tasked to serve as the CTF HQ. Designated as CTF Kismayo, it initially consisted of TF 3-14 IN (US) and TF 1 Para (BE). The CTF's mission was to establish and maintain security to support humanitarian relief in the Kismayo area of operations.⁷⁷ Fire support planning in the CTF Kismayo base order included provisions for one battery of 105mm towed howitzers with a Q-36 Firefinder radar attached although the howitzers never deployed. In addition, the Supporting Arms Liaison Team (SALT) coordinated and planned joint fires for the CTF.⁷⁸

Selected fire support elements within the CJTF performed a multitude of collateral missions during the operation. The division FSE was used to coordinate and execute the division's deployment and redeployment from Somalia.⁷⁹ This task resulted from assignment of the ARFOR headquarters mission to the division.

Throughout the division, brigade and battalion FSEs supplemented indispensable civil affairs assets in performing a similar collateral mission. Restrictive ROE limited the use of attack aviation and fire support assets and severely curtailed the aviation brigade's role as the division quick reaction force. Consequently, the Aviation Brigade FSE deployed to Somalia in a civil-military operations (CMO) role.⁸⁰ 1st Brigade correspondingly assigned its brigade FSO as the S5 (civil-military affairs staff officer). Brigade and battalion FSEs performed the CMO role throughout the operation.⁸¹

Australian fire support personnel deployed to Somalia (a battery commander and forward observer parties of a direct support battery) also performed a CMO mission. The battery commander consolidated his personnel and formed a civil-military operations team (CMOT). The CMOT performed liaison functions with NGOs, UN agencies and local political groups. Their

performance was particularly key in reestablishing police, judiciary, and prison systems within the Australian area of operations.⁸²

Lastly, the targeting process was used extensively throughout ORH. The JTF Somalia FSE established four criteria that were necessary for target approval if national command authority was required: military significance of the target, targeting information reliability, extent of possible collateral damage and engagement weapon options.⁸³

OPERATIONS GRAPPLE AND ABLE SENTRY

The current conflict in the Former Republic of Yugoslavia (FRY) is seated in long standing historical territorial claims that originate in the 14th century. Ethnic hatred and religious rivalry combine to fuel the conflicts between factional groups within FRY. The UN established the United Nations Protection Force (UNPROFOR) in March of 1992 to stabilize the conflict between the Croatians and the Serbians.⁸⁴ The UNPROFOR mission within the FRY is to maintain the peace and order pending an overall political solution to the conflicts.⁸⁵ The force consists of elements from a multitude of contributing nations to include the United Kingdom and the United States. Activities performed by UNPROFOR include demilitarizing UN protected zones, agreement verifications, ensuring safe passage of humanitarian convoys, monitoring evacuation of sick and wounded, and overseeing the disarming of belligerents.

US and British troops supporting UNPROFOR operate under two different operational plans. Operation Grapple is the operational name for the United Kingdom's force contribution to UNPROFOR. British forces are deployed throughout the UNPROFOR zone (Croatia, Bosnia-Herzegovina and Macedonia) providing humanitarian aid and protection to UN relief convoys and

medical facilities.⁸⁶ Able Sentry is the operational name for the US contribution to UNPROFOR. Political considerations have limited US ground forces to one 300 man infantry battalion deployed only in Macedonia.⁸⁷ This unit is performing peacekeeping observation duties along the Macedonian-Serbian border.

Fire support assets available within Bosnia and Macedonia include mortars, close air support aircraft and tactical air. Tactical units have established plans for close air support from the assets available in theatre.⁸⁸ Discussion of the strategic use of air strikes is not within the scope of this paper.

British use of fire support in Operation Grapple has been decidedly more liberal due to a different viewpoint on the use of force and the higher level of threat associated with their area of operations. The British differentiate between assertiveness and aggressiveness when applying force during the conduct of peace operations. For example, the British view establishing UN air superiority over Bosnia as an unspoken threat to the belligerents thereby asserting the UN's position and limiting belligerent ground and air activity.⁸⁹ British forces within UNPROFOR have also used mortars in self defense engaging belligerents that threatened a UN convoy.⁹⁰ Firepower has been used to assert the British right to implement the established UN mandate.

The rules of engagement established for Operation Grapple also provide an option for the use of fire support to establish an assertive position. ROE options which authorize a demonstrative use of firepower by the British peace operation force provide commanders the ability to exploit the psychological role of fire support.⁹¹

UNPROFOR directives specify an additional collateral use for fire support personnel in Bosnia. Following the establishment of a heavy weapons

Exclusion Zone (EZ) by the cease-fire agreement of 23 February 1994 between the Croatian Defense Council (HVO) and the Army of Bosnia-Herzegovina (BiH), UNPROFOR established Weapons Control Points (WCP) within the EZ. The purpose of the WCPs is to turn in and place heavy weapons (artillery, tanks, mortars) and radars under UN control.⁹² Because of the continuing threat from the Bosnian-Serb Army (BSA), some points are designated as active sites. Weapons positioned in active sites can be fired by belligerents in self defense if fired upon by the BSA. Active sites require UNPROFOR artillery qualified monitoring teams that are 1) conversant with all artillery and mortar systems within the theatre 2) practised in gun and command post safety procedures and 3) experienced users of indirect weapon firing tables.FN24 The artillery/mortar qualified NCO is tasked with checking the elevation, bearing and charge of each weapon in the active site as well as plot the fall of shot before obtaining authority for the weapon to fire.⁹³ The intent for using fire support personnel in this manner is to ensure agreement compliance between the HVO and BiH.

COMBAT TRAINING CENTER

LESSONS LEARNED

US Army combat training centers are now conducting training rotations which focus on peace operations. The Combat Maneuver Training Center (CMTC) conducted contingency operations rotations for US and Dutch battalion task forces to prepare them for duty in FRY. The data presented is a summary of the lessons learned from these training rotations.

CMTC observations conclude that the primary reason for fire support in peace operations is force protection.⁹⁴ The report elaborates that although the requirement for fire support may be infrequent, it must always be available.

Rotational units used non-lethal fires (illumination and smoke) munitions as a sniper or ambush marking round. Techniques using pre-determined trigger events for firing the marking round enhanced the responsiveness of fires. Pre-coordinated triggers also assist in controlling and using fires within the intent of the peace operation mandate and ROE. Only the pre-determined hostile action by the belligerent would initiate the use of lethal fires. Task forces also planned priority targets along routes of movement to enhance the security of the moving units.⁹⁵ Lastly, the Q-36 Firefinder radar was used as an intelligence device for ground forces. Accurate grid locations of enemy indirect fire weapons were used to vector friendly ground units to the target.

The Joint Readiness Training Center (JRTC) has conducted two OOTW rotations. Although there is limited data available, the lessons noted during these rotations mirror those from CMTC. Rotational units expended a large number of illumination rounds to mark positions and to reduce unwanted belligerent movements during hours of limited visibility. Radars were used in a similar manner using zones to protect key assets within the task force. Units did determine that the gun camera tapes from the attack helicopter support in the task force should be reviewed by the targeting team for intelligence and target development.⁹⁶

FIRE SUPPORT DOCTRINAL AND TRAINING IMPLICATIONS

The examination of fire support contributions in peace operations thus far indicates definitive roles for fire support elements and units. The following analysis addresses the sufficiency of fire support doctrine in relation to performing these types of roles and mission. Secondly, this analysis will assess

the potential training implications for fire support units that conduct these types of roles and functions. Recommendations for identified shortfalls are included.

Doctrine

US doctrine for peace operations is currently in an evolutionary state. Existing doctrine at all levels primarily focuses on the traditionally recognized sub-elements of low intensity conflict (insurgency and counterinsurgency, combatting terrorism, peacekeeping and contingency operations in low intensity conflict (LIC)). Joint publications 3-07, Doctrine for Joint Operations in Low Intensity Conflict (JP3-07) and 3-07.3, Joint Tactics, Techniques and Procedures for Peacekeeping (JP3-07.3) provide background information on selected aspects of peace operations. The peacekeeping mission is treated in comprehensive detail. However, the other three categories of peace operations are not discussed in any depth. The paucity of peace operational doctrine creates a significant shortfall for commanders tasked to execute these types of missions.

Until recently, there was almost no Army doctrine for peace operations. Field Manuals 100-20, Military Operations in Low Intensity Conflict and 7-98, Operations in Low Intensity Conflict address the same aspects of peace operations as the joint literature. Recognition of this doctrinal shortfall resulted in the publication of FM 100-23, Peace Operations. Although still in draft form, this manual addresses the environment of peace operations to include related concepts, the full range of missions, planning and tasks.⁹⁷ The manual's intent was to consolidate all information relevant to the conduct of peace operations into a single manual. It is a comprehensive, good first start.

The state of fire support doctrine mirrors that of army doctrine; evolving and incomplete. Updated four years ago, the FM 6-20-xx series of

manuals provides comprehensive doctrine for the conduct of conventional fire support missions in the mid to high intensity conflict range. Only FM 6-20-50, Tactics, Techniques and Procedures for Fire Support for Brigade Operations (Light) addresses fire support's role in low intensity conflict or the conduct of joint operations.⁹⁸ Fire support's capstone manual, FM 6-20, Fire Support in the Airland Battle, provides extremely limited implementing doctrine.

References to peace operations include only a one page reference citing the flexible nature of the fire support system and it's capability to respond to battlefield situations including the "special demands of low-intensity conflict."⁹⁹ The other manuals provide only cursory references to fire support's roles in LIC and peace operations.

The roles and missions that fire support personnel and units will execute during peace operations should be identified and published in doctrinal manuals. Inclusion in current fire support publications as an annex, similar to the treatment of urban and terrain considerations, may be the appropriate solution. Capturing the lessons learned from recently concluded peace operations will provide the data from which TTP can be developed to address fire support tasks such as

- the increased difficulty to plan and clear fires in peace operations due to the multitude of players (joint forces, coalition forces, NGOs, and civilian populations)
- the use of precision guided munitions
- innovative methods to utilize conventional munitions in peace operations (e.g., copperhead against roadblocks, scatterable mines to limit belligerent movement)
- methods for using field artillery units for non-lethal support (e.g., maneuver, transportation assets, communication nodes)

Fire support's role in assisting in the management of the increased demands for control and coordination during peace operations is critical. Doctrinal guidance on "how to" accomplish these difficult tasks is essential. Development of this doctrinal base will provide an adequate level of implementation doctrine to guide fire support practitioners involved in executing peace operations.

Training

Two general observations apply to the preparatory training for units deploying for peace operations. First, there is a requirement to develop a less aggressive attitude in US soldiers. Inculcating the concept of using only the minimum force required is an important training task prior to deployment. Lessons learned from operations in Bosnia and Somalia indicate the importance of this element of preparatory training. Secondly, the conduct of this type of training should incorporate the unique requirements of the operational environment's ROE. This indoctrination is particularly important for fire supporters who control inordinately large amounts of firepower (by peace operations standards).

The execution of the force protection role in peace operations is similar to providing force protection with fire support in conventional wartime operations. However, the conditions prevalent during peace operations demands focused training in three areas: conduct of close fires, use of laser designators and the coordination for PGMs. The requirement for each of these difficult tasks is clearly identified in the historical use of fire support presented in the case studies.

Training for the use of close fires is particularly challenging, requiring significant collective training effort from both fire support and maneuver arms. Training plans developed for British units preparing for Operation Grapple also

reflect this requirement.¹⁰⁰ Timely, accurate fires are key to protecting unit positions when threatened by belligerent activities.

Lessons learned from ORH similarly support increased education/training on the use of laser designators. Munition accuracy is assured by highly trained fire support soldiers operating laser designators. Familiarity with the capabilities and characteristics of the myriad of laser guided munitions is a critical component for fire support success. Joint and coalition interoperability requirements multiply the difficulty of this training task.

The complexity of even "simple" missions in peace operations requires comprehensive training in joint operations. Moreover, delivery of precision munitions normally requires the integration of joint delivery assets thereby expanding the scope of training required. One particular ORH mission highlights the degree of joint coordination required for successful engagement of enemy positions. An enemy mortar engaging friendly units could not be pinpointed by army attack helicopters in the general vicinity. A navy EA-6B Prowler monitored an unsecure transmission from the mortar position stating that they had covered their position with a tarp. An OH-58D helicopter was then called in to use its forward looking infrared radar to pinpoint the mortar position and laser designate the mortar for attack helicopter engagement.¹⁰¹

The deployment of units for peace operations causes the degradation of skills developed during normal wartime training. Skill erosion results from the lack of use for extended periods during peace operations. In essence, peace operations have a tendency to dull the fighting edge of the combat units deployed.¹⁰² British units deployed to Bosnia experienced "skills fade" after only three months in theatre.¹⁰³ US chain of command feedback from the infantry battalion deployed in Macedonia reflect similar concerns. Training requirements for post-rotation training included crew gunnery, mortar platoon

operations and the incorporation of combat multipliers into task force operations.¹⁰⁴ The lack of firing facilities availability during the conduct of peace operations is the major contributor to this degradation. Extensive training is normally required following the redeployment of these units. It should be noted, however, that both of these examples do not involve any type of peace-enforcement. The closer a unit's mission parallels its wartime mission, the less skills will be diminished.

The potential for diminished combat skills serves as a cautionary note for the direct transition of units involved in peace operations into combat operations. British artillery units experienced a degraded ability to provide fire support during the Falklands War due to operations conducted in Northern Ireland. Rotational duty to Northern Ireland reduced the effectiveness of the fire support link with the infantry. A Northern Ireland mentality created "minimum force" thinking and behavior.¹⁰⁵ Direct transition of units involved in the lower spectrum of peace operations (peacekeeping, observation duties) to wartime operations is not a good idea. Planners must consider this fact when determining which units will deploy to a follow-on contingency operation.

An additional concern is the potential credibility gap that may develop between the maneuver arms and fire support BOS. This "lack of confidence" in the supporting fires can become a pervasive element within the combined arms team. Actual operations have yet to demonstrate such a case, but the potential for the development of this problem remains. Units must work exceptionally hard to maintain the teamwork required for the fire support system to function efficiently and well.

The final training consideration lies in addressing the myriad of additional functions that fire support personnel may be called upon to perform during the conduct of peace operations. Liaison duties, negotiation skills, use

of interpreters, sound and range training, fire base construction and reconnaissance methods highlight a few of the skills fire support personnel may need during future peace operations. The conditions imposed by joint, coalition, combined, inter-agency, and NGO coordination and planning increase the difficulty of these tasks and demand new skills and techniques. Ensuring the interoperability of coalition fire support systems is an additional challenge. Institutional training is the most efficient method to address these requirements. Integrating instruction on peace operation requirements into the fire support schooling process will serve to alleviate these potential shortfalls during future peace missions.

CONCLUSIONS

A number of conclusions may be drawn from the analysis conducted in this study. The first and perhaps most significant conclusion drawn from this study is that the "traditional role" of using fire support for protecting the force remains valid in peace operations. US military units should not be deployed for a peacekeeping or peace-enforcement mission without a full military capability to respond to belligerent offensive actions. Fire support system design is situationally dependent. Just as all peace operations are different in character, so too should be the response in terms of firepower availability. Air power is the most flexible element but its use can be limited by weather conditions, urban areas, or terrain. Planners must consider the various elements of fire support and provide the commander adequate firepower given the force deployed and the potential threat. The increased volatility of the international security environment makes using a lightly armed peace force an unacceptable risk.

Secondly, current fire support doctrine is focuses on mid to high intensity conflict. Despite the doctrinal overhaul completed in early 1990, the present doctrine has very limited reference to LIC. Doctrinal fire support guidance or TTPs for the execution of the rapidly expanding area of peace operations (less peacekeeping) do not exist. Development and inclusion of fire support TTP for the complete spectrum of peace operations is required.

The third conclusion drawn from this study is that the execution of peace operations poses significant training challenges for the fire support BOS. Focused training in close fires and joint procedures is necessary for fire support units to perform efficiently. Institutional training for non-standard missions will enhance the capability of the fire support BOS to provide control and coordination to peace operations. Finally, recognition of the potential for "skills fade" focuses a fire support unit's training programs following a peace operation. Maintenance of high levels of fire support proficiency will require combined arms integration during post-peace rotation training.

Lastly, the fire support BOS is not limited to purely traditional roles and functions. There are a myriad of collateral functions for which fire support units and personnel are well suited. FSEs can easily transition to perform joint or coalition LNO duties. Fire support unit staffs have performed well in maneuver staff roles. More imaginative uses for fire support assets include supplemental reconnaissance, maneuver, or transportation functions. Versatile applications of the capabilities inherent to fire support personnel and equipment must be considered to maximize the force's potential. As General Franks stated, specialist approaches are no longer acceptable. Innovative application of the fire support BOS is a requirement for peace operations.

APPENDIX 1: DEFINITIONS

Historically, the term peacekeeping was used to describe a wide spectrum of diplomatic and military operations supporting the development of peace. Intrinsic to the traditional definition of peacekeeping was the mutual consent of the warring belligerents prior to the establishment of a peacekeeping force. However, the recent evolution of the international security environment has modified the nature of conflict requiring peace intervention forces. UN interventions in Cambodia, Northern Iraq, Somalia and Bosnia all occurred without the mutual consent of both (or multiple) warring factions. Crucial differences in the mission parameters and requirements for each type of mission make this single term unsatisfactory. Use of these peacekeeping derivatives often created confusion within the operational environment for peace operation personnel (military and civilian). Recent US doctrine coined peace operations as an umbrella term which encompasses all peace related activities.

Two definitions of peace operations exist within current US military doctrine. Joint Publication 1-02, Dictionary of Military and Associated Terms defines peace operations as:

[operations] encompassing peacekeeping, peace enforcement and any other military, paramilitary or non-military action taken in support of a diplomatic peacemaking process.¹⁰⁶

Army Field Manual 100-23, Peace Operations (Draft Version 6) expands upon

this definition describing peace operations as:

[operations] encompassing observers and monitors, traditional peace-keeping, preventive deployment, security assistance to a civil authority, protections and deliver of humanitarian relief, guaranteeing rights of passage, imposing sanctions, peace enforcement and any other military, para-military or non-military action taken in support of diplomatic peacemaking process.¹⁰⁷

The components of peace operations include peacemaking, peacekeeping, humanitarian intervention, peace-enforcement and peace-building. Each subordinate mission has specific parameters associated with it, particularly for military forces. Clear and precise understanding of the missions encompassed by peace operations and their implications is an essential requirement toward understanding the strategic and operational environment of peace operations.

Peacemaking: the process of arranging an end to disputes, and resolving issues that led to conflict, primarily through diplomacy, mediation, negotiation or other forms of peaceful settlement.¹⁰⁸

Peacemaking encompasses the diplomatic and political processes that bridge the continuity of effort to reach a peaceful settlement for the conflict. Elements of peacemaking which determine the instruments of power to be used in a peace operation emanate from national political leaders, UN resolutions/mandates as well as joint negotiations between belligerents. Any type of peace operation must occur within the auspices of the political and diplomatic parameters established through peacemaking.

Peacekeeping: non-combat military operations (exclusive of self-defense) that are undertaken by outside forces with the consent of all major belligerent parties, designed to monitor and facilitate implementation of an existing truce agreement in support of diplomatic efforts to reach a political settlement to the dispute.¹⁰⁹

A prerequisite for the deployment of a peacekeeping force is the mutual consent of the major belligerents to establish the force. Normally, a truce has been implemented and ongoing combat has ceased. In most peacekeeping missions, the force observes and monitors belligerent forces to provide physical separation on the ground while providing the UN an unbiased, impartial viewpoint towards the conflict. Maintaining this appearance of impartiality towards each of the belligerents is critical to the success of a peacekeeping mission. To this end, forces involved in peacekeeping missions are normally lightly armed, passively equipped and use force only in self defense.

Peace-enforcement: a form of combat, armed intervention, or the physical threat of armed intervention, pursuant to international authorization of the coercive use of military power to compel compliance with international sanctions or resolutions -- the primary purpose of which is the maintenance or restoration of the peace under conditions broadly defined by the international community.¹¹⁰

Peace-enforcement operations involve the use of force to restore international peace and security. The operation's objective is to terminate the conflict conducive to diplomatic and political initiatives that will lead to conflict resolution.FN20 Peace enforcement legitimacy emanates from UN charter articles 41 (sanctions), 42 (use of force) and 51 (national self-defense or collective self-defense).¹¹¹ Peace-enforcers are active fighters who lose their impartiality and are rarely welcome by one or the other side within the conflict.¹¹² Forces deployed in this role must have adequate firepower to fight and win a war if necessary. Typical missions include the enforcement of sanctions, guaranteeing freedom of movement, restoration of territorial integrity, protection of a minority's human rights and the protection of humanitarian relief efforts. Normally, forces deployed as peace-enforcers will engage in combat operations. United States participation in peace-enforcement

missions ranges from Operation Desert Storm (restoration of Kuwait's territorial integrity) to Operation Restore Hope (protection of humanitarian relief operations).

Peace-building: post conflict diplomatic and military actions that seek to rebuild the institutions and infrastructure of a nation that is torn by civil war; or build mutually beneficial bonds among nations formerly at war in order to avoid a relapse into conflict.¹¹³

Peace-building constitutes the final phase to all peace operations.

Reconstructing the political and diplomatic ties will significantly enhance the capability for maintaining a peaceful co-existence between the former belligerents. Military forces contribute to peace-building through maintaining security, restoring civilian authority, reconstructing key facilities (e.g., hospitals, schools, fire stations) and restoring the operation of critical functions (e.g., sanitation, utilities, transportation network). There will be a peace-building phase for all peace operations.

APPENDIX 2: GLOSSARY OF ABBREVIATIONS AND ACRONYMS

I MEF	1st Marine Expeditionary Force
ANGLICO	Air and Naval Ground Liaison Company
ARFOR	Army Forces
BiH	Army of Bosnia-Herzegovina
BLT	Battalion Landing Team
BOS	Battle Operating System
CAF	Combined Air Task Force
CAS	Close Air Support
CG	Commanding General
CJTF	Combined Joint Task Force
CMO	Civil-military Operations
CMOT	Civil-military Operations Team
CMTC	Combined Maneuver Training Center
COLT	Combat Observation Lasing Team
CTC	Combat Training Center
CTF	Combined Task Force
EW	Electronic Warfare
EZ	Exclusion Zone
FRY	Former Republic of Yugoslavia
FSE	Fire Support Element
HVO	Croatian Defense Council
IDF	Israeli Defense Force
JRTC	Joint Readiness Training Center
JTF	Joint Task Force
LAF	Lebanese Armed Forces

LIC	Low Intensity Conflict
LNO	Liaison Officer
MARFOR	Marine Forces
MAU	Marine Amphibious Unit
MNF	Multinational Force
NCA	National Command Authority
NGO	Non-Governmental Organizations
NSS	National Security Strategy
OOTW	Operations Other Than War
OPC	Operation Provide Comfort
OPLAN	Operations Plan
ORH	Operation Restore Hope
PGM	Precision Guided Munitions
PLO	Palestine Liberation Organization
PVO	Private Volunteer Organization
QRC	Quick Reaction Company
SALT	Supporting Arms Liaison Team
SOP	Standard Operating Procedure
TRADOC	Training and Doctrine Command
TTP	Tactics, Techniques and Procedures
UN	United Nations
UNITAF	Unified Task Force
UNPROFOR	United Nations Protection Force
US	United States
USCENTCOM	United States Central Command
WCP	Weapons Control Point

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¹William J. Clinton, "National Security Strategy of Engagement and Enlargement." (Washington DC: The White House, July 1994), p. 31.

²Frederick M. Franks Jr., "Aviation in the Post Cold War Army", excerpts from an address at the 1992 Army Aviation Association of America Annual Convention published in Army Aviation, Westport, CT, Army Aviation Publications (31 October 1992), p. 4.

³Lawrence A. Yates, Power Pack: U. S. Intervention in the Dominican Republic, 1965-1966, Fort Leavenworth, KS, Command and General Staff College, Leavenworth Paper # 15, (July 1988), p. 98.

⁴Ibid, p. 140.

⁵Gordon W. Rudd, Operation Provide Comfort: One More Tile on the Mosaic, 6 April - 15 July 1991, Washington, DC, U.S. Army Center of Military History, undated; as reprinted in Operation Provide Comfort: Lessons Learned and Observations, Fort Bragg, NC., Department of Evaluations and Standardization, Final Draft (1 October 1992): p. 258.

⁶Donald G. Goff, Building Coalitions for Humanitarian Operations: Operation Provide Comfort, (Carlisle Barracks, PA, US Army War College, April 1992), p. 23.

⁷Russel W. Glenn, "Unpublished Research Notes", (May 1994), p.50. One battery of 155mm self-propelled howitzers deployed to Somalia as part of the heavy armored quick reaction force augmentation package. C Battery, 41st Artillery deployed o/a 8 October 1993 and redeployed on 9 February 1994. The battery did not fire any missions while deployed.

⁸Raphael J. Hallada, "Facing the Winds of Change", Field Artillery, (April 1990), p.2.

⁹Bruce W. Rember, Wings for Peace: Air Power in Peacemaking Operations, Command and General Staff College, (Fort Leavenworth, KS: Dec 1992), p. 42. Major Rember's monograph demonstrates that air power has the potential to compel certain behavior in belligerent groups, but only under limited circumstances. Historical examples used in his analysis include British

middle east operations in 1919, the Aden Protectorate in 1935, the US attack on Libya in 1986 and the UN operations in Yugoslavia today.

¹⁰Joint Chiefs of Staff, JCS PUB 1-02, Dictionary of Military and Associated Terms (Washington DC: The Joint Staff, 1 Mar 1989), p.125.

¹¹US Army, Field Manual 100-23 Peace Operations (Draft Version 6) (Washington, DC: Headquarters, Department of the Army, 19 Jan 1994), p.G-6.

¹²US Army, Field Manual 6-20 Fire Support in the Airland Battle (Washington, DC: Headquarters, Department of the Army, 18 Oct 1988), p. 12.

¹³Chapter six of the UN charter outlines methodologies by which nations can peacefully settle their differences. The use of mediation, negotiation, the World Court, and economic sanctions are outlined in chapter six. Chapter seven of the UN charter authorizes the use of military force to maintain or restore international peace and security. Contemporary peace operations lie between a chapter six non-coercive mission and a chapter seven coercive mission. Thus, the terms six and one-half to six and three-quarters are used to describe them.

¹⁴Peacekeeping forces in Cyprus were over matched during the Turkish intervention in 1974. The UN troops were unable to defend themselves against the heavy fire that was directed toward them. However, the force was able to defend limited key terrain that the commander deemed critical to their mission. The Cyprus International Airport was the most notable of these type of actions. However, the peacekeepers would not have been able to withstand a full scale attack by the Turkish forces. In Sri Lanka, Indian peacekeepers deployed into what they considered a minimal threat environment. Insurgent forces ambushed Indian forces destroying nearly two battalions of light infantry. Fire support was not available in either scenario to mitigate the force ratios between the peacekeepers and their aggressors.

¹⁵FM 100-23, p.1-12.

¹⁶Casper W. Weinberger, Fighting for Peace: Seven Critical Years in the Pentagon, (New York: Warner Books, 1990), p. 433-445. Secretary of Defense Caspar Weinberger outlined six major tests for the use of US combat power. He felt that he had identified "the single most critical element of a successful democracy: a strong consensus of support and agreement for our basic purposes." Weinberger's criteria were: 1) Commitment of forces should occur only if the engagement is vital to our national interests or those of

our allies. 2) Commit combat forces only if adequate resources to achieve our objectives are also committed. 3) Before committing forces, develop clearly defined political and military objectives and the methodology by which our forces can accomplish the objectives. 4) Continually reassess the relationship between our objectives and the forces we have committed. 5) Ensure the support of the American people and the Congress before committing the troops. 6) Commit American forces to combat only as a last resort. Secretary Weinberger felt these criteria combined with decisive leadership would ensure that US forces would not be committed without adequate support.

¹⁷FM 100-23, p. 4-4.

¹⁸Richard A. Norton and Thomas G. Weiss, "UN Peacekeepers: Soldiers with a Difference", Foreign Policy Association Headline Series, (Spring 1990). p.39.

¹⁹FM 100-23, p. 1-14 to 1-15. See also Joint Pub 3-07, Doctrine for Joint Operations in Low Intensity Conflict, p.I-17 and Joint Pub 3-07.3, Tactics, Techniques and Procedures for Peacekeeping Operations, p. IV-7 to IV-9.

²⁰US Army, Headquarters, 2nd Battalion 15th Infantry, Memorandum, Subject: Able Sentry Plans (15 June 1994), p. 2.

²¹Training Peacekeepers for Deployment to Bosnia, Center for Army Lessons Learned, Fort Leavenworth, KS (June 1994), para. 1.5.2. Hereafter referred to as TPDB.

²²Abaizaid, p. 17.

²³John P. Cavanaugh, Operation Provide Comfort: A Model for Future NATO Operations, Fort Leavenworth, KS, Command and General Staff College (28 May 1992), p. 22. See also JULLS report number 11326-46958.

²⁴US Army, Headquarters 10th ID (L), Frago 19 to TF Mountain OPLAN 93-2 (Operation Restore Hope), (10 Jan 1993), p.2. See also Joint Chiefs of Staff, Headquarters Combined Arms Command, JULLS Report number 12619-76636, (2 Feb 1993), p. 1-2.

²⁵Glenn, p. 84.

²⁶Gustav Haggglund, "Peacekeeping in a Modern World", Survival (London, UK: Brassey's, May/June 1990), p. 239-9.

²⁷Glenn, p.84.

²⁸Glenn, p. 26.

²⁹S. L. A. Marshall, Men Against Fire, (Gloucester, MA: Peter Smith, 1947-Reprinted 1987), p. 191.

³⁰US Army, Headquarters 10th ID (L), Operation Restore Hope After Action Report, p.23. Hereafter referred to as ORH AAR.

³¹John H. Sinclair, 10th ID (L) Artillery S3, Telephone interview (29 Nov 1994).

³²John P. Cavanaugh, Operation Provide Comfort: A Model for Future NATO Operations, Fort Leavenworth, KS, Command and General Staff College (28 May 1992), p. 22. See also JULLS report number 11326-46958.

³³John P. Abizaid and John R. Wood, "Preparing for Peacekeeping: Military Training and the Peacekeeping Environment" (May 1993), p. 7.

³⁴ORH AAR, p. 34.

³⁵Phillip L. Brinkley, Tactical Requirements for Peacekeeping Operations, Fort Leavenworth, KS: (2 Dec 1985), p. 17.

³⁶Ibid, p. 17.

³⁷This total includes all American and French losses during the duration of the MNF II. The majority of the losses occurred during a two day period when US and French positions were attacked with car bombs.

³⁸Eric Hammel, The Root, (New York, NY: Harcourt, Brace Janovich Publishers, 1985), p. 127.

³⁹Ibid, p. 134.

⁴⁰Ibid, p. 134.

⁴¹Norton, p. 38-39.

⁴²Brinkley, p. 17.

⁴³Ibid, p. 17.

⁴⁴Ibid, p. 17-18.

⁴⁵Rudd, p. 243.

⁴⁶Ibid, p. 239.

⁴⁷Cavanaugh, p. 3.

⁴⁸Rudd, p. 244.

⁴⁹Cavanaugh, p. 12.

⁵⁰Rudd, p. 1.

⁵¹Cavanaugh, p. 39.

⁵²Ibid., p. 12-13.

⁵³Rudd, p. 258.

⁵⁴Ibid, p. 258.

⁵⁵Goff, Donald G., Building Coalitions for Humanitarian Operations: Operation Provide Comfort, (Carlisle Barracks, PA, US Army War College, April 1992), p. 23.

⁵⁶Abaizaid, p. 17.

⁵⁷Cavanaugh, p. 26.]

⁵⁸Abaizaid, p. 17.

⁵⁹Ibid, p. 17.

⁶⁰Kelley, p. 13.

⁶¹Operation Restore Hope Lessons Learned Report, Center for Army Lessons Learned, Fort Leavenworth, KS (Nov 1993), p. 2-3. Hereafter referred to as ORH LLR.

⁶²*Ibid*, p. 4.

⁶³Waldo D. Freeman, Robert B Lambert and Jason D Mims, Operation Restore Hope: A US CENTCOM Perspective, Military Review, (Sept 1993), p. 62.

⁶⁴*Ibid*, p. 61.

⁶⁵*Ibid*, p. 64.

⁶⁶US Army Operations In Support Of UNOSOM II, Center for Army Lessons Learned, Fort Leavenworth, KS (Oct 1994), p. 1. Hereafter referred to as UNOSOM.

⁶⁷*Ibid*, p.1.

⁶⁸*Ibid*, p. k-1 to k-5. The chronology and losses experienced by the members of the UNOSOM force follows. 5 June 1993- Members of Aideed's militia ambushed Pakistani soldiers on killing 24 and wounding 44. 25 September- A QRF UH-60 helicopter was shot down killing 3. 3-4 October- Task Force Ranger conducted a raid on Aideed's headquarters and suffered 18 KIA. 7 October- Mortar attack on airfield kills one and wounds 12.

⁶⁹Glenn, p. 59.

⁷⁰Joint Chiefs of Staff, Headquarters 10th ID (L), JULLS report number 11446-58873, (22 Mar 1993), p. 1. See also ORH AAR, p. 35.

⁷¹*Ibid*, p. 1.

⁷²Joint Chiefs of Staff, Headquarters 10th ID (L), JULLS report number 10746-52974, p. 1. See also ORH AAR.

⁷³US Army, Headquarters 10th ID (L), Frago 19 to TF Mountain OPLAN 93-2 (Operation Restore Hope), (10 Jan 1993), p.2.

⁷⁴Joint Chiefs of Staff, Headquarters Combined Arms Command, JULLS Report number 12619-76636, (2 Feb 1993), p. 1-2.

⁷⁵US Army, "MOUT Targeting: Designation and Delivery", News From the Front, Fort Leavenworth KS, (Jan 1994), p. 1-3.

⁷⁶Ibid, p. 3.

⁷⁷US Army, Headquarters 10th ID (L) Artillery, Combined Task Force Kismayo After Action Report, published as part of SG CALL-Restore Hope, Somalia Collection Group Lessons Learned, SSG-AAR-005, (undated), p. 3.

⁷⁸US Army, Headquarters, 10th ID (L), TF Mountain OPLAN 93-2 (Operation Restore Hope), (10 Dec 1992), p. 4. as published in SG CALL-Restore Hope, Somalia Collection Group Lessons Learned, SSG OPNL-001.

⁷⁹US Army, Headquarters 10th ID (L), Operation Restore Hope After Action Report, (2 Apr 1993), p. 1, as published in SG CALL-Restore Hope, Somalia Collection Group Lessons Learned, AAR 003 (AAR 057, document 1). Hereafter referred to as ORH AAR.

⁸⁰ORH AAR, p. I-3-3.

⁸¹Martin N. Stanton, "A Riot in Wanwaylen: Lessons Learned", Army Magazine (Washington DC: Association of the US Army, December 1994), p. 30.

⁸²Hugh Smith, Peacekeeping: Challenges for the Future (Canberra, Australia: Australian Defence Studies Centre, 1993), p. 63-64.

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⁸⁵Ibid, p. 2-6.

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⁸⁷Ibid.

⁸⁸US Army, Headquarters, 2nd Battalion 15th Infantry, Memorandum, Subject: Able Sentry Plans (15 June 1994), p. 2.

⁸⁹TPDB, para. 1.5.2.

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⁹¹Operation Grapple Rules Of Engagement Card, (No date), side 1.

⁹²United Kingdom Land Forces Memorandum, Subject: Initial Report for SO3 FIBUATT attach to DWR 1 - Operation Grapple, FIBUA Training Team, CATC, (Warminster, GB, 31 March 1994), enclosure 1.

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⁹⁴US Army, 7th Army Training Command, Training Note # 9, Subject: CMTC Lessons Learned Contingency Operations, (undated), p.14.

⁹⁵Ibid, p. 14.

⁹⁶US Army, Headquarters, Joint Readiness Training Center, Take Home Package Rotation 94-2, Appendix C (Fire Support Observations), (13 Nov 1993), p. C-5.

⁹⁷FM 100-23, p. 1-1 thru 1-20.

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⁹⁹US Army, Field Manual 6-20, Fire Support in the Airland Battle, (Washington, DC: Headquarters, Department of the Army, 17 May 1988), p. 1-7.

¹⁰⁰United Kingdom Land Forces Memorandum, Subject: OP Grapple Lessons Learned, Director of General Land Warfare, Ministry of Defence, (Imphal Block, Erskine Barracks, Wilton, Salisbury, Wilts, GB, 6 Aug 1993), p. B-5 and p. B-1-2k. Hereafter referred to as UKLFM. See also Scales, p. 241.

¹⁰¹Glenn, p. 81.

¹⁰²Allen, p. 13.

¹⁰³UKLFM, p. 14 and p. B-3.

¹⁰⁴US Army, "The Heavy Infantry Battalion in Peace Operations", News From the Front, Fort Leavenworth KS, (May 1994), p. 3.

¹⁰⁵Robert H. Scales, Firepower in Limited War, (Washington, DC: National Defense University Press, 1990), p. 234.

¹⁰⁶JCS Pub 1-02, p. 125.

¹⁰⁷FM 100-23, p. G-6.

¹⁰⁸Ibid, p. G-5.

¹⁰⁹Ibid.

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¹¹²Donald M. Snow, Peacekeeping, Peacemaking and Peace-Enforcement: The US Role in the New International Order, (Carlisle Barracks, PA, Strategic Studies Institute, US Army War College, February 1993) p. 4.

¹¹³FM 100-23, p. G-5.

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